

**TITLE OF INVENTION:** Mobile Grave Excavator



## BACKGROUND OF INVENTION

### 1.) Field of Invention:

A mobile, steerable excavating machine primarily used for digging of graves. (New)

### 2) Description of related art:

The excavator of the present invention in some aspects have some of the same general types of excavating equipment as disclosed in such Patents as the U.S. Pat. No. to Valkenburgh 3,772,807 dated November 20, 1973 and U.S. Pat. No. to Sing 3,577,664 dated May 4, 1971, however this invention is an improvement on this excavator, as it is operated by hydraulics instead of a hand crank and all 4 wheels of the present invention are steerable allowing the operator to easily move the excavator in and out of tight areas where head stones or similar items are surrounding the area to be excavated. (new)

## SUMMARY OF INVENTION

A mobile, steerable excavating machine primarily used for the digging of graves. In which, vertical cutting bar assemblies are mounted to a horizontal frame to allow digging of the earth downwardly and laterally within the frame of the machine while removing the earth from the hole on one side or the other into a haul able device.

The cutting assembly will cut through the soil and in incidents where the soil is extremely rocky the cutting assembly can operate in two ways; one by cutting a swatch straight across the ground or if a large object such as a large rock is stopping the machine you simply stop the assembly raise it and lower it again in front of the object, and remove the object manually, and then continue with the cutting of the soil. (New)

## PREFERRED EMBODIMENT

### TITLE: MOBILE GRAVE DIGGER EXCAVATOR

Figure number 5 is a 3-D drawing of the mobile grave digger excavator. Item (1) is the structural frame of the grave digger, item (2) is the horizontal carriage which allows the movement of the digging assembly to move forward and backward, item(3) is the vertical carriage assembly which moves the carriage up and down, item (3A) is the horizontal gear rack which moves the assembly horizontally, item (3B) is the vertical gear rack which moves the assembly vertically, item (4) the I-beam is part of the structural frame, item (5) is the connecting shaft which connects the two sprockets keeping them in unison and insuring the digging teeth stay in sequence, item (6) the control box controls the movement including the steering, leveling, and powers the drive wheels. Item (7) is the hydraulic steering cylinder which turns the back and front wheels left and right, item (8) is the connecting steering rod which insures that the motion of the left and right wheels are in unison. Item (9) is the hydraulic reservoir which holds the hydraulic fluid required to operate the mobile grave digger excavator, and (9A) is the fill spout for the Hydraulic Fluid, item (10) is the hydraulic pump which can be driven by several different variations of power, item (11) are the guiding arms which are attached to (7) the steering cylinders located on each end of the assembly. Item (12) is the hydraulic leveling cylinders located above each wheel which levels the machine. Item (13) are the driving wheels which have a self locking hydraulic motor located on all 4 corners to insure the entire digging assembly does not move out of place when powering up and operating the machine. Item (14) are the hydraulic motors set as listed: (a) is the digging drive motor, (b) is the auger drive motor, (c) is the vertical hydraulic carriage motor, and (d) is the horizontal

hydraulic drive motor. Item (15) is the carrier rollers which moves the digging assembly forwards and backwards, and up and down across the track, and is an important part of the structural frame (1). Item (16) shows the rollers integrated on this device, these rollers move the carriage assembly horizontally and vertically along the frame of the assembly. The sprockets (17) on the cutting assembly carry the chain which pulls the cutting bars (18) where the earth has been pulverized by the cutting teeth (19) and carries the material to the catch trough (20) where it is then dumped into the auger item (21) which moves the dirt outside of the machine.

**DESCRIPTION:**

A mobile, steerable excavating machine primarily used for the digging of graves. In which, vertical cutting bar assemblies are mounted to a horizontal frame to allow digging of the earth downwardly and laterally within the frame of the machine while removing the earth from the hole on one side or the other into a haul able device.

The wheels of the Mobile Grave Excavator are conventional pneumatic tires of a size to accommodate the ability for the floatation in soft ground. In addition all four (4) wheels are powered by a hydraulic motor mounted in the each of the hubs; the wheels are also steerable and are mounted on the frame with a hydraulic cylinder used for leveling.

The cutting bar is mounted so its operation will work vertically as well as horizontally and is operated by a separate hydraulic motor removing the pulverized material. The full operation of this machine is hydraulically powered with an internal combustion engine. Moving this equipment over public highways would require transportation on a trailer or truck.

## **BRIEF DESCRIPTION OF DRAWINGS/FIGURES**

The invention is described below with reference to the following figures.

Fig. 1 is a schematic plan top view of the Mobile Grave Digger

Fig. 2. is a schematic plan side view of the cutting bar assembly

Fig. 3. is a schematic front view of the sprockets, cutting bars, and chains

Fig. 4 is a detailed schematic drawing of the cutting bar assembly,

Fig. 5 is a detailed 3-D drawing of the Mobile Grave Digger Excavator

## **BRIEF DESCRIPTION OF EXHIBITS**

**Exhibit 1 is a schematic plan top view of the Mobil Grave Digger**

**Exhibit 2 is a schematic plan side view of the cutting bar assembly**

**Exhibit 3 is a schematic front view of the sprockets, cutting bars, and chains**

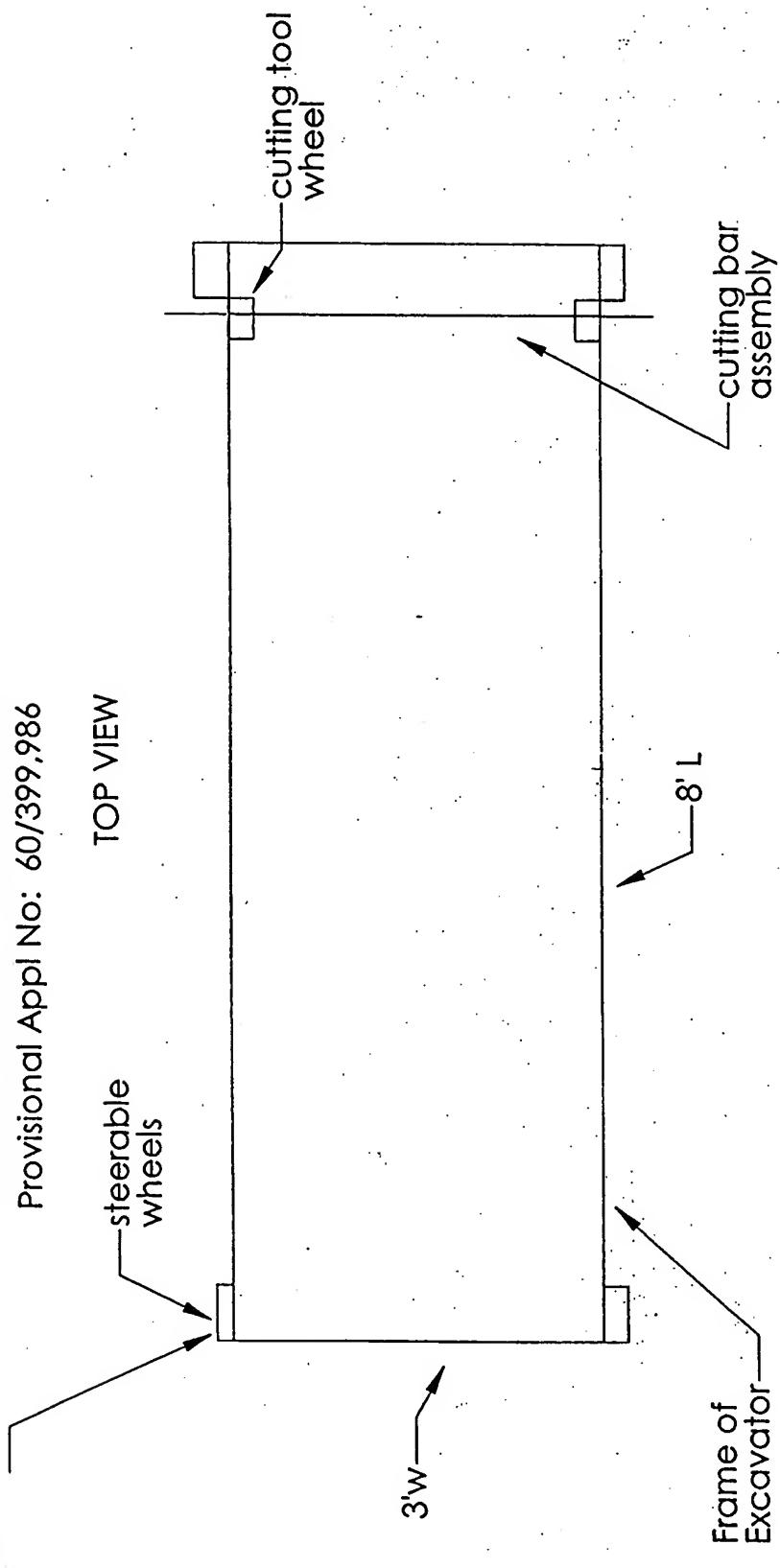
**Exhibit 4 is a detailed drawing of the cutting bar assembly**

**Exhibit 5 is a detailed 3-D drawing of the Mobile Grave Digger Excavator**

Hydraulic  
motor  
mounted in  
hub

Title of Invention: Mobile Grave Excavator  
Inventors Name: William R. Cole  
Provisional Appl No: 60/399,986

TOP VIEW



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Inventors Name: William R. Cole  
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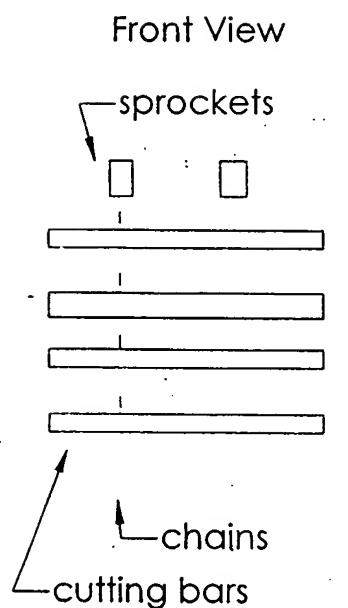


EXHIBIT 3

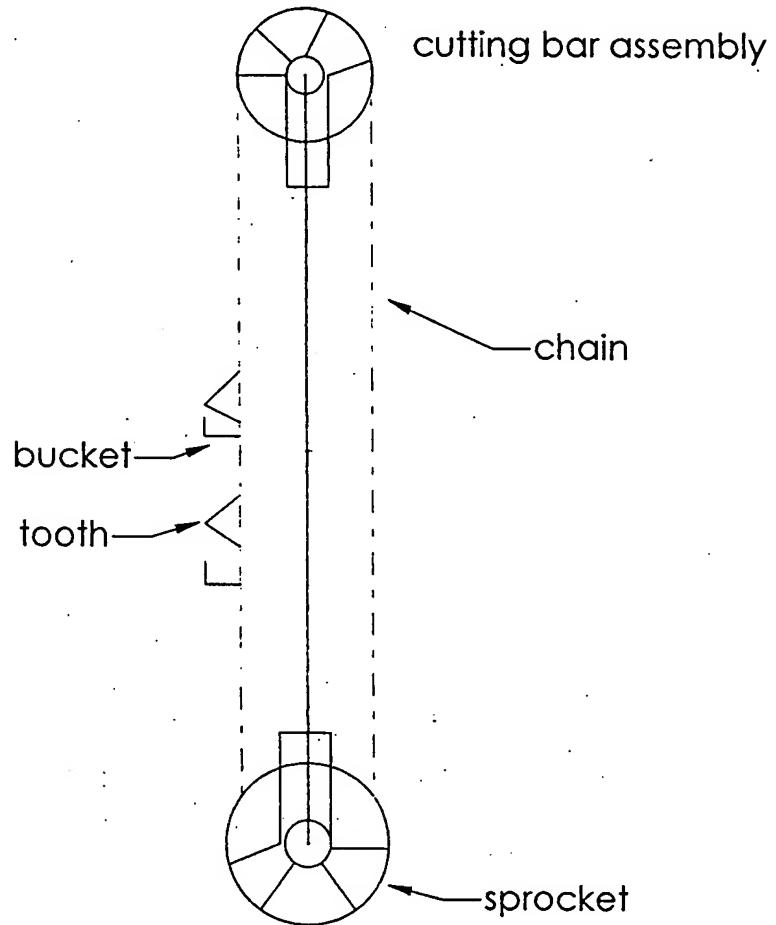


EXHIBIT 2

Title of Invention: Mobile Grave Excavator

Inventor's Name: William R. Cole

Provisional Appl No: 60/399,986

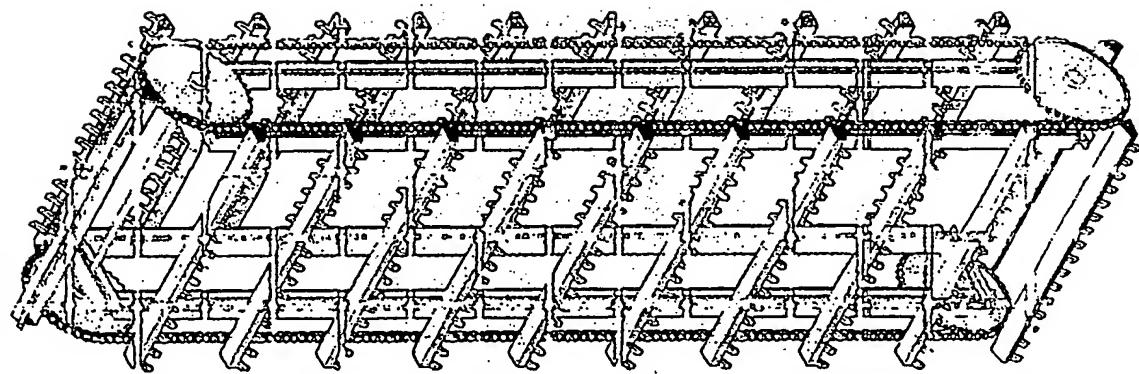


EXHIBIT 4

